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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,410	07/27/2001	Jari-Matti Karjanmaa	33047/236961	8863

826 7590 08/27/2002

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EXAMINER

ALVO, MARC S

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/27/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

mx-9

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/916,410	KARJANMAA, JARI-MATTI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 10-16 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUDT et al with or without SYRÉ or VICKERY (Tappi article) with or without DE 196 32 988.

RUDT et al teaches measuring the properties of a paper web with an infrared camera (column 5, line 5 and lines 14-18) at various locations (see column 5, lines 31-35) in a paper making process; including the forming section (paper machine), calender section and coating section; to correct deviations (moisture content, e.g. wetness) in the process treatments and the manufacturing process. It would have been obvious that the paper web would have exited the forming section as it travels to the other sections of the manufacturing process. RUDT et al further teaches controlling the manufacturing and treatment processes to correct the deviations. The claimed "thermal camera" does not appear to differ from the infrared camera of REDT et al. If necessary, it would have been especially obvious to use an infrared camera as the detecting means of RUDT et al as the use of an infrared camera to measure paper web deviations is taught by SYRÉ. Or if the infrared camera of RUDT et al is not a thermal camera, then RUDT et al teaches that infrared cameras can be used when measuring the moisture (wetness) of the web (column 5, lines 14-18). VICKERY teaches that infrared thermal cameras are particularly useful and easier to use than other moisture sensors and VICKERY teaches that such thermal cameras can be used in measuring and controlling the moisture profile of a paper web during the wet end

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and/or dry end of the manufacturing process. It would have been obvious to use the easier to use thermal camera of VICKERY for the infrared camera of RUDT et al. RUDT et al teaches continuous monitoring the process for pre-determined lengths of time. Obviously the images could be taken over periodic lengths of time, see RUDT et al, column 5, line 66-column 6, line 4. Claims 21 and 22 are rejected as RUDT et al teaches saving the data and displaying the data at a future time. Claims 2, 16 and 20 are rejected as RUDT et al teaches measuring deformities in the coating section and teaches that surface texture, color, gloss and moisture are among the variables measured (column 5, lines 25-16). It would have been obvious to the artisan that any deviation in the coating would change surface texture, color, gloss and/or moisture of the paper web and thus show up as a measured deviation in the process of RUDT et al. The camera of RUDT et al continuously monitors the process (see abstract and column 7, lines 23-25), when a deviation is detected a signal is sent to a control means (20). RUDT et al states that the control means 20 “can additionally be used to supervise the status of each device in the system” (column 8, lines 30-35) and that “necessary adjustments and/or repairs can be started quickly and the machine restored to normal operation” (column 8, lines 36-42). This does not differ from the papermaker of the instant process analyzing the images and controlling the process, see Applicant’s paper of 6/12/2002, page 4, lines 1-2. If necessary, DE 196 32 988 teaches continuously monitoring and continuously analyzing and continuously controlling a papermaking operation. If RUDT et al does not teach continuous analyzing and control, then such would have been obvious from the teachings of DE 196 32 988.

Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUDT et al with or without SYRÉ or VICKERY (Tappi article) with or without DE 196 32 988 as applied to claim 1 above, and further in view of NIEMI.

NIEMI teaches measuring and controlling the moisture profile of a paper web and teaches that the control can be feed forward (measured prior to the treatment to be controlled) or feedback (measured after the treatment to be controlled). It would have been obvious to use the feed forward or feedback control system of NIEMI to control the pulp properties, e.g. moisture, of RUDT et al.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUDT et al with or without SYRÉ with or without DE 196 32 988.

See SYRÉ, column 2, lines 47-55, for using infrared light spectrum of 0.7 to 18.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUDT et al with or without VICKERY (Tappi article) as applied to claim 1 above, and further in view of SYRÉ.

SYRÉ teaches using an infrared camera using infrared light spectrum wavelength of 0.7 to 18 micrometers (column 2, lines 47-55) to detect the properties of a paper web. It would have been obvious to use the infrared wavelengths of SYRÉ in the infrared camera of VICKERY when measuring the properties, e.g. moisture content, of the web.

Claims 2, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUDT et al with or without SYRÉ or VICKERY with or without DE 196 32 988 as applied to claim 1 above, and further in view of DOBBIE or BILHORN et al.

If necessary DOBBIE or BILHORN teach monitoring coated paper webs to defect non-uniformities in the coating. It would have been obvious to the routineer that the sensor in the coating section of RU DT et al could be used to detect non-uniformities in the coating layer of the web of RU DT et al.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "exit of the paper machine" is indefinite. Does this term mean exit from the forming section of the paper machine? All the sections described in the RUDYT reference; forming, pressing, drying, calendering, coating; are sections of a paper machine. Is the exiting of claim 1 from the forming section or from the coating section? It is not clear where the imaging of claim 1 takes place. Is this before, during or after the web exits the paper machine?

The argument that there are several "exits" from the paper machine is not convincing, as there is only one exit from the entire "paper machine". Applicant appears to be claiming an exit from sections of the paper machine not the paper machine as a whole.

Applicant's amendment" captured by the thermal images on a continual basis, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

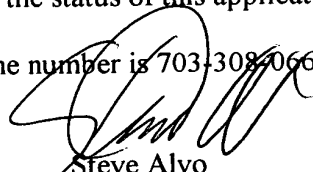
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 703-308-2048. The examiner can normally be reached on 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Steve Alvo  
Primary Examiner  
Art Unit 1731

msa  
August 25, 2002